

A study on effects of Covid-19 on performance on stock market in FMCG sector, Healthcare Sector, Pharmaceutical Sector

¹Harsh Patel, ² Dr. Taral patel

¹ Student B.V Patel Institute of Management, UTU, Tarsadia, Maliba Campus, Gujarat, India

² Teaching Assistant Professor, B.V Patel Institute of Management, UTU, Tarsadia, Maliba Campus, Gujarat, India

Abstract: This project is based on the performance on the different sector with different companies in BSE. There are three different sector that are Pharmaceutical Sector, FMCG Sector, and Healthcare Sector. In Pharmaceutical Sector there are three different companies are there that are Sun Pharma, Divi's Lab, and Dr.Reddy.in FMCG Sector there are three Different companies are there that are UBL, ITC, and Dabur. And in Healthcare Sector there are three different companies are there that are Alkem Lab, Apollo Hospital, and Fortis. All this companies were affected most during Covid-19 lockdown and unlockdown.. The indicator of this study is paired T test.

Keywords - Covid-19 lockdown, BSE – Bombay Stock Exchange, NSE – National Stock Exchange

I. INTRODUCTION

1.1 Pharmaceutical Sector in India

India is the largest provider of generic drugs globally. Indian pharmaceutical sector supplies over 50% of global demand for various vaccines, 40% of generic demand in the US and 25% of all medicine in the UK.

India enjoys an important position in the global pharmaceuticals sector. The country also has a large pool of scientists and engineers with a potential to steer the industry ahead to greater heights. Presently, over 80% of the antiretroviral drugs used globally to combat AIDS (Acquired Immune Deficiency Syndrome) are supplied by Indian pharmaceutical firms.

1.2 COVID-19 response for Pharmaceutical companies

During these unprecedented times, pharmaceutical companies are responding to the rapid challenges arising from disruption in supply chains and the need to change business processes. If the current COVID-19 pandemic lasts for a medium/long span of time, it may impact the supply of active material and ingredients (mainly from China), as well as the import and export of pharmaceuticals.

1.3 Fast- Moving Consumer Goods (FMCG) Sector in India

Fast-moving consumer goods (FMCG) sector is India's fourth largest sector with household and personal care accounting for 50% of FMCG sales in India. Growing awareness, easier access and changing lifestyles have been the key growth drivers for the sector. The urban segment (accounts for a revenue share of around 55%) is the largest contributor to the overall revenue generated by the FMCG sector in India. However, in the last few years, the FMCG market has grown at a faster pace in rural India compared to urban India. Semi-urban and rural segments are growing at a rapid pace and FMCG products account for 50% of the total rural spending.

1.4 Healthcare Sector in India

Healthcare has become one of India's largest sector, both in terms of revenue and employment. Healthcare comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment. The Indian healthcare sector is growing at a brisk pace due to its strengthening coverage, services and increasing expenditure by public as well private players.

II. LITREATURE REVIEW

2.1 Aravind M and Manojkrishnan C G (2020) a research on "COVID 19: Effect on leading pharmaceutical stocks listed with NSE". The objective is to examine how Covid-19 outbreak has affected leading pharmaceutical stocks listed with the National Stock Exchange of India. The tools which have been used for data analysis are benchmarking index, Computing Historical Volatility with the help of secondary data. The study found was that the pharmaceutical stocks will move against the general market trend (contrarian effect). The study period was classified in to pre-crisis period and Covid-19 crisis period. The data consists of 123 daily price observations of the selected 10 pharmaceutical companies. The period of study is ranging from 3rd September 2019 to 28th February 2020. The results reported that momentum effect is persisting with pharmaceutical stocks as the pharmaceutical stocks are moving in accordance with the general benchmarking index.

2.2 Bhumika Jain, Priya Ghiya (2020) a research on "IMPACT OF COVID-19 ON FMCG INDUSTRY. The objective is to assess the discriminatory power of most significant ratios. The tools which has been used for data analysis is Kai Square Test with the help of primary data. The study found was that FMCG sector has shown amazing growth and is the fourth largest sector of Indian economy. Because of Covid-19 and announcement of lockdown lead to increasing demands for FMCG products massively owing to panic buying by consumers and companies having to increase production. There is a significant relationship between people's expenditure increasing with the fact that they are storing extra necessities.

2.3 Ahmed Mahdi Abdulkareem (2020) a research on “Financial Performance of Indian Pharmaceutical Companies: Analysis of Leverage and Cost of Capital. The objective is to study the Performance of Indian Pharmaceutical Companies during Covid-19. The tools which have been used for data analysis are Degree of Operating Leverage, Degree of Financial Leverage, Degree of Combined Leverage, Cost of Capital, ANOVA test with the help of secondary data. The study found was that the results of the study reveal that there is a significant difference in the (means) variables in terms of leverage (operating, finance, and combined) and cost of capital. All leverages are different to each other and the cost of capital. The analysis reveals that Sun Pharma performed well during the study period, whereas Lupine underperformed in all aspects.

III. RESEARCH METHODOLOGY

In this context the researcher is interested in undertaking an analysis to find the performance of COVID-19 on performance of three sectors. Hence, the present study entitled “A study on effect of COVID-19 on performance of FMCG, Healthcare, and Pharmaceutical in India” has been undertaken

3.1 Objective of Research

- To study the performance in different sector in stock market
- To identify the performance with the help of paired T test
- To find out major effect on selected companies on stock market
- To study the impact of COVID-19 on the returns of stocks indexed in BSE

3.2 Research Design

The research design is cause and effect

The data for this study is selected based on COVID-19 effect on the performance of three different sector. Among the companies listed with stock exchange of India namely, Bombay Stock Exchange, 3 companies with consistent financial data are selected. Certain companies are excluded owing to irregular and/or inconsistent financial data support.

The following are the selected Pharmaceutical, Healthcare and FMCG companies of this study

Pharmaceutical Sector	Healthcare Sector	FMCG Sector
Sun Pharma	Alkem Laboratories Ltd.	ITC
Divi's Laboratories Ltd.	Apollo Hospital Enterprise Ltd.	United Breweries Ltd.
Dr. Reddy	Fortis Healthcare Ltd.	Dabur India Ltd.

3.3 Period of the Study

The study covers a period of lockdown (i.e. 23rd March 2020- 30th May 2020) and unlockdown (i.e. 1st June 2020 – 30th July 2020)

3.4 Data Collection:

This paper is based on analytical research. The shares of companies which are indexed in BSE are considered for analysis. The price quotes have gathered from the website of Bombay Stock Exchange (bseindia.com). Three different sectors that are FMCG, healthcare, pharmaceutical

The study has considered the impact of three major events on the share prices and share returns of fourteen sectors. The events considered in this study are;

- Announcement of lockdown for India by Indian Prime Minister
- Announcement of unlockdown for India by Indian Prime Minister

3.5 Hypotheses of the study

- H0: There is no significant difference existed among different sectors, share returns during the announcement of lockdown in India.
- H1: There is a significant existed among the different sectors, share returns during the announcement of lockdown in India.

3.6 Scope of the study

Study on Indian stock market and its analysis of lockdown and unlockdown COVID-19 conditions has etched a large platform for researchers to continue the study effect of the same on stock prices and on country's economy as a whole in the further days.

3.7 Paired T test

The **paired t-test** gives a hypothesis examination of the difference between population means for a set of random samples whose variations are almost normally distributed. Subjects are often tested in a before-after situation or with subjects as alike as possible. The paired t-test is a test that the differences between the two observations are zero.

Paired T-test is a test which is based on the differences between the values of a single pair that is one deducted from the other. In the formula for a paired t-test, this difference is notated as d. The formula of the paired t-test is defined as the sum of the differences of each pair divided by the square root of n times the sum of the differences squared minus the sum of the squared differences, overall n-1.

3.8 Research Gap

There is not similar type of study made with consideration of literature reviews so there is undiscovered is in the Bombay stock exchange Sensex. Research gap helps to make way for researcher in existing study.

3.9 Benefits of the study

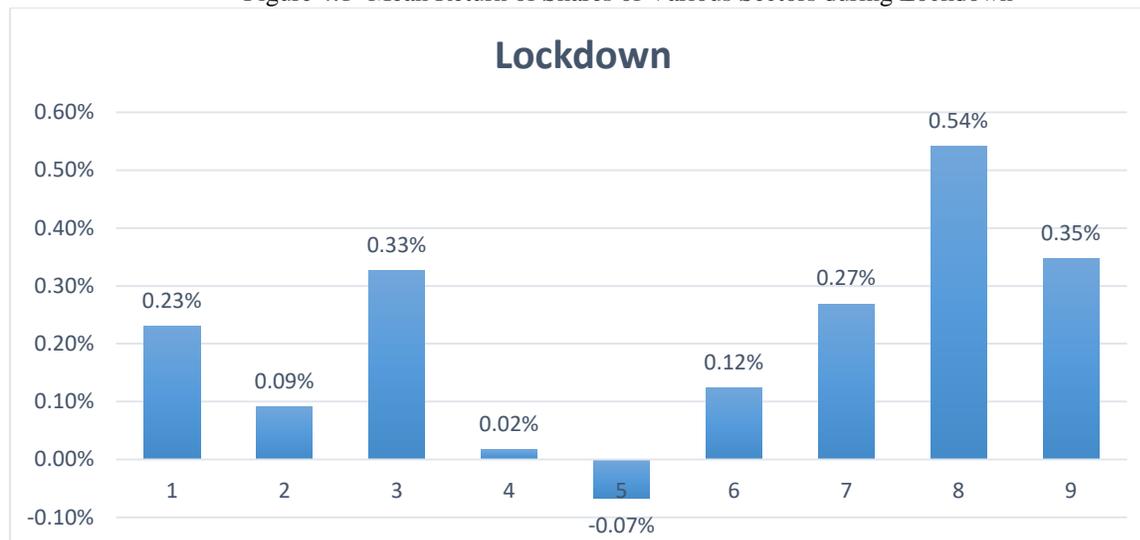
- This study can provide the exact price movement of stock market
- This study provide the data on returns of stock market of lockdown and unlockdown in covid-19.

IV. RESULTS AND DISCUSSION

This section deals with the presentation and discussion of results of data analysis.

4.1 Results of Mean Return During Lockdown of the Study

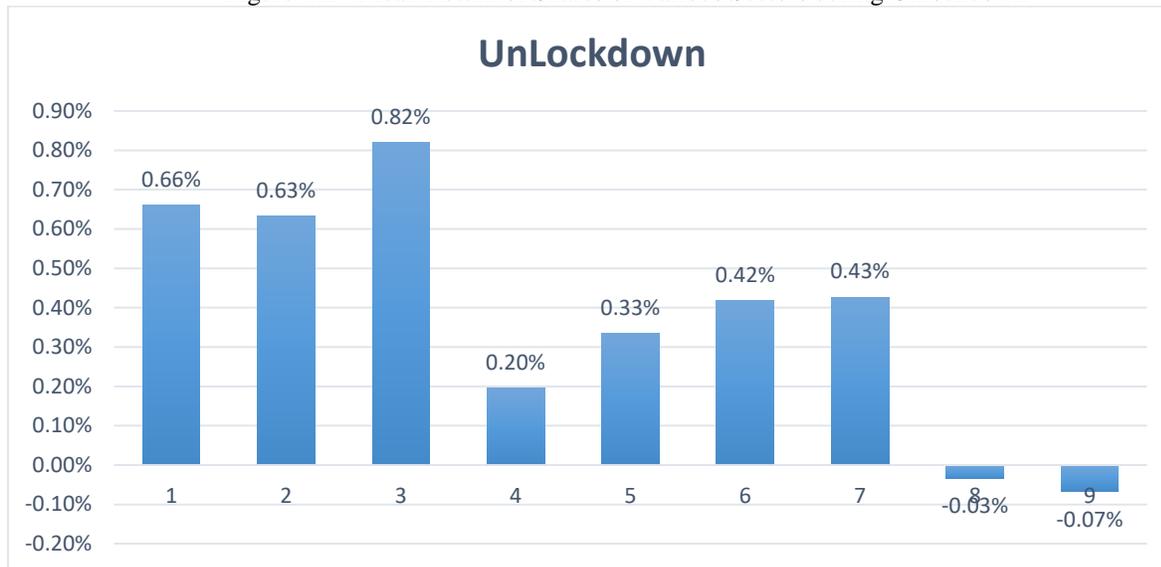
Figure 4.1- Mean Return of Shares of Various Sectors during Lockdown



As you can see in Figure 4.1 was that the highest return in stock market is was Healthcare Sector and the company which is highest is Apollo Hospital that was 0.54% and the second highest is Fortis that is 0.35%. And the lowest return in stock market was FMCG Sector and the company which is lowest was ITC was -0.07% and second lowest return in stock market was UBL was -0.03%.

4.2 Mean Return during Unlockdown

Figure-4.2 - Mean Return of Shares of Various Sectors during Unlockdown



As you can see in figure 4.2 that the return in stock market in daily base. The highest return was in pharmaceutical sector and the highest return in company was Dr. Reddy that is 0.82% and second highest return was Sun Pharma that is 0.66%. The lowest return in sector was Healthcare Sector and the lowest return in company was Fortis -0.07%. And second lowest return was Apollo Hospital -0.03%

4.3: Paired Sample statistic

Table 4.3: Paired Samples Statistic and correlation of different sectors with their companies

Paired Samples Statistic and correlation							
		Mean	N	SD	Std. Error Mean	Correlation	Sig.
Sun Pharma	Unlockdown	485.36	44	10.19	.010	.010	.951
	Lockdown	436.74	44	50.10	7.55		
Divi,s Lab	Unlockdown	2318.07	44	93.51	14.10	-.505	.00
	Lockdown	2243.03	44	187.20	28.34		
Dr.Reddy	Unlockdown	4018.72	44	117.17	17.66	.083	.591
	Lockdown	3676.11	44	380.37	57.34		
UBL	Unlockdown	1008.23	44	32.16	4.85	.285	.061
	Lockdown	909.59	44	31.32	4.72		
ITC	Unlockdown	195.33	44	5.64	.85	-.247	.106
	Lockdown	174.36	44	12.49	1.88		
Dabur	Unlockdown	467.57	44	14.71	2.22	-.423	.004
	Lockdown	457.38	44	30.01	4.52		
Aklem Lab	Unlockdown	2404.89	44	71.83	10.83	-.094	.545
	Lockdown	1296.25	44	89.84	13.54		
Apollo Hospital	Unlockdown	1422.50	44	83.12	12.53	-.324	.032
	Lockdown	2501.60	44	165.52	24.95		
Fortis	Unlockdown	125.33	44	6.20	.94	-.324	.032
	Lockdown	121.33	44	4.58	.69		

Here this table shows the paired samples statistic and correlation of different sectors with their different companies. In table 4.3 there is mean, standard deviation, standard error mean, correlation on the period of lockdown and unlockdown. The degree of freedom are 43. One could observe from the results of Paired t test which was applied to find out the effect of announcement of Covid-19 lockdown on the different sectors' share prices that the null hypothesis has rejected at 5 percent level of significance. It could be inferred that the shares of various sectors such as Pharma, FMCG indexed under BSE's major index Sensex 50 have an impact due to the announcement of Covid-19 lockdown

4.4 Paired T test

Table 2: Paired T test of different sectors with their companies

Paired Samples Test									
		Paired Differences					T-Value	DF	Sig. (2-tailed)
		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Sun Pharma	Lockdown – Unlockedown	48.62	51.03	7.69	33.10	64.14	6.319	43	.000
Divi's Lab	Lockdown – Unlockedown	75.04	248.66	37.49	-.56	150.63	2.00	43	.052
Dr. Reddy	Lockdown – Unlockedown	342.61	388.58	58.58	224.47	460.75	5.85	43	.000
UBL	Lockdown – Unlockedown	98.64	37.97	5.72	87.10	110.18	17.23	43	.000
ITC	Lockdown – Unlockedown	20.98	14.92	2.25	16.44	25.51	9.32	43	.000
Dabur	Lockdown – Unlockedown	10.18	38.61	5.82	-1.56	21.92	1.75	43	.087
Alkem Lab	Lockdown – Unlockedown	1108.64	120.16	18.12	1072.10	1145.17	61.20	43	.000
Apollo Hospital	Lockdown – Unlockedown	-1079.10	207.88	31.34	-1142.30	-1015.90	-34.43	43	.000
Fortis	Lockdown – Unlockedown	3.99	10.26	1.55	.872	7.11	2.58	43	.013

Table 4.4 shows the paired T test between two duration of time (i.e. lockdown and unlock down). The T – value shows the different of price of stock. It could be found from the results of Paired t test that the announcement of 43 days lockdown by Indian Government has impacted on the prices of shares from Pharmaceutical, Healthcare sectors. Therefore, the null hypothesis has rejected at 5 percent level. It could be further inferred that the lockdown announcement has impacted the share prices of companies from the FMCG sector. Hence, the null hypotheses rejected at 10% level of significance.

V. CONCLUSION

Results of the study show that the impact of Covid-19 Announcements on BSE Stocks varied among various sectors companies; the pharmaceutical sector in that sun pharma company demonstrated highest negative return followed by the FMCG sector in that UBL company. Pharmaceutical sector and FMCG sector have reported negative performance amid covid-19 pandemic. Sectors like Healthcare provided highest mean return. After the major announcements, stock markets started rising mainly due to the stimulus packages announced by the various Governments.

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